

Hybridization Apparatus



Big SHOT III™ Hybridization Oven

Models 230402 and 230402-2

Features:

- PID temperature controller for rapid heat up and excellent temperature stability
- Forced air convection
- User settable over temperature safety thermostat
- Fully programmable digital timer - up to 99 hours, 59 minutes
- Carousel speed up to 60 RPM in 1 RPM increments
- Reversible door
- Stackable
- Easy to remove stainless steel drip pan
- UL/CSA/CE Certified

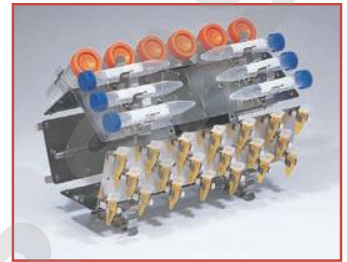


| | Model 230402 (115 VAC) | Model 230402-2 (230 VAC) |
|--|---|-----------------------------|
| Vessel Capacity (standard carousel included) | 10 - 35 mm x 300 mm, or 10 - 35 mm x 225 mm, or 20 - 35 mm x 150 mm, or 20 - 35 mm x 100 mm bottles | |
| Temperature Range | Ambient +10°C to 100°C | |
| Temperature Set Range | 0°C to 100°C | |
| Stability | +/-0.2°C | |
| Accuracy | Ambient +65°C in 25 minutes | |
| Heat-up Time | +/-0.25°C at 65°C | |
| Overall Dimensions (Width x Length x Height) | 47.6 cm x 35.9 cm* x 47.9 cm (18.75 in x 14.12 in x 18.87 in) | |
| Chamber Dimensions (Width x Length x Height) | 34.3 cm x 25.7 cm x 27.3 cm (13.5 in x 10.12 in x 10.75 in) | |
| Speed | 5 to 60 RPM (variable) | |
| Timer | Up to 99 hr 59 min | |
| Net Weight | 19.1 kg (42 lb) | |
| Shipping Weight | 24.5 kg (65 lb) | |
| Electrical | 115 VAC 60 Hz 320 W (UL/ CSA) | 230 VAC 50/60 Hz 325 W (CE) |

Big SHOT III™ Accessories

Carousels and Clips

Model 230442 - The Multi-Tube Carousel works with a variety of interchangeable clip sizes to hold a combination of 50 mL, 15 mL, 2.0 mL, and 1.5 mL tubes, allowing for simultaneous processing of multiple sized tubes. The clips are supplied with mounting hardware, and mount onto the plates on the carousel. Depending on the tube size, the tubes may be positioned horizontally, vertically, or at an angle.



| Number of Plates on Carousel | Tube Sizes Held | Maximum No. and Orientation of Tubes per Plate | Total Number of Tubes Held (carousel fully loaded) | Corresponding Clips (Bags of 50) |
|------------------------------|-----------------|--|--|----------------------------------|
| 5 | 50 mL | 5 Horizontal | 25 | 230250 |
| | | 6 Vertical | 30 | |
| 5 | 15 mL | 6 Horizontal | 30 | 230215 |
| | | 7 Vertical | 35 | |
| 5 | 2.0/ 1.5 mL | 20 Any orientation | 100 | 230210 |

Carousel for Microplates

Model 230426 - These carousels hold standard microplates or deep well plates. (Plates must be sealed before use in carousel.)

| Microplate Carousel | No. of Plates Held per Carousel |
|---------------------|---------------------------------|
| 230426 | 10 |



Large Bottle Carousel

Model 230440 - For processing large membranes, this carousel holds four 70 mm x 220 mm (750 mL) acrylic bottles, or four 55 mm x 180 mm (400 mL) acrylic bottles.



Rocker Platform

Model 230420 - Use the Rocker Platform for incubation of large blots in flat-bottomed containers.

| | |
|---------------------|--|
| Platform dimensions | 21.5 cm x 28.0 cm x (8.5 in x 11 in) |
| Weight capacity | 5.0 kg (11 lb) |
| Speed | 5 - 60 strokes per minutes, variable speed |
| Rocking angle | 16° |



Large Acrylic Bottles and Gaskets

Large bottles are constructed of beta-blocking acrylic. Designed with screw-on cap and leak-proof gasket.

| Bottle Size | Model Number |
|--------------------------------------|--------------|
| 70 mm x 220 mm (750 mL) bottle, each | 502-0009 |
| 55 mm x 180 mm (400 mL) bottle, each | 502-0010 |
| Gasket for 502-0009, package of 2 | A1902701 |
| Gasket for 502-0010, package of 2 | A1902702 |



Little SHOT III™ and Bambino™ Hybridization Ovens

Models 230502 and 230502-2 | Models 230301 and 230301-2

Little SHOT III™ medium capacity hybridization oven

- PID temperature controller for rapid heat up and excellent temperature stability
- Lift off lid for full access to heating chamber
- Stainless steel drip pan
- Forced air convection delivers excellent uniformity
- UL/CSA/CE Certified



Bambino™ compact hybridization oven

- Holds up to four 50 mL, six 15 mL or twelve 2.0/ 1.5 mL polypropylene conical centrifuge tubes
- Forced air convection delivers excellent uniformity
- Highly compact, yet offers the same features found in larger, more expensive units
- Tubes rotate within the chamber at an adjustable rate of 6 - 20 RPM
- A stainless steel heating chamber with sealed floor seam for easy cleaning and a clear acrylic lid
- UL/CSA/CE Certified

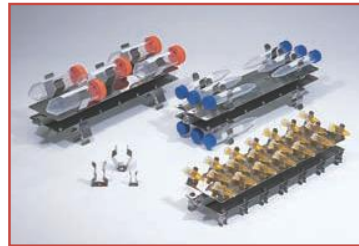


| | Little SHOT III™ | | Bambino™ | |
|---|---|--------------------------------|---|-----------------------------|
| | Model 230502 (115 VAC) | Model 230502-2 (230 VAC) | Model 230301 (115 VAC) | Model 230301-2 (230 VAC) |
| Vessel Capacity (standard carousel included) | 4- 35 mm x 300 mm, or 4 - 3 m x 25 mm, or 8 - 35 mm x 150 mm, or 8 - 35 mm x 100 mm bottles | | 4 - 50 mL conical tubes | |
| Temperature Range | Ambient + 10°C to 75°C | | Ambient + 10°C to 80°C | |
| Temperature Set Range | 0°C to 100°C | | 0°C to 80°C | |
| Stability | +/-0.5°C | | +/-0.1°C | |
| Accuracy | +/-0.5°C | | +/-0.5°C | |
| Heat-up Time | Ambient to 65°C in 20 minutes | | Ambient to 70°C in 25 minutes | |
| Speed | 5 to 60 RPM (variable) | | 6 to 20 RPM (variable) | |
| Timer | Up to 99 hr 59 min | | NA | |
| Overall Dimensions (Width x Length x Height) | 22.9 cm x 59.1 cm x 33.0 cm (9.0 in x 23.25 in x 13.0 in) | | 25.4 cm x 26.7 cm x 16.2 cm (10.0 in x 10.5 in x 6.5 in) | |
| Chamber Dimensions (Width x Length x Height) | 17.1 cm x 32.4 cm x 22.2 cm (6.75 in x 12.75 in x 8.75 in) | | 15.0 cm x 15.0 cm x 14.0 cm (6.0 in x 6.0 in x 5.5 in) | |
| Net Weight | 12.5 kg (27.5 lb) | | 4.4 kg (10 lb) | |
| Shipping Weight | 14.8 kg (32 lb) | | 5.9 kg (13 lb) | |
| Electrical | 115 VAC 60 Hz 290 W (UL/ CSA) | 230 VAC 50/60 Hz 290 W (CE) | 115 VAC 50/60 Hz 90 W | 230 VAC 50/60 Hz 90 W |

Little SHOT III™ & Bambino Accessories

Carousels and Clips

Models 230552 & 230332 - The Multi-Tube Carousels work with a variety of interchangeable clip sizes to hold a combination of 50 mL, 15 mL, 2.0 mL, and 1.5 mL tubes, allowing for simultaneous processing of multiple sized tubes. The clips are supplied with mounting hardware, and mount onto the plates on the carousel. Depending on the tube size, the tubes may be positioned horizontally, vertically, or at an angle.



Multi-Tube Carousels for Little SHOT III



Multi-Tube Carousels for Bambino

Multi-tube Carousel for Model 230502

| Number of Plates on Carousel | Tube Sizes Held | Maximum No. and Orientation of Tubes per Plate | Total Number of Tubes Held (carousel fully loaded) | Corresponding Clips (Bags of 50) |
|------------------------------|-----------------|--|--|----------------------------------|
| 2 | 50 mL | 6 Horizontal | 10 | 230250 |
| 2 | 15 mL | 6 Horizontal | 12 | 230215 |
| 2 | 2.0/ 1.5 mL | 20 Any orientation | 40 | 230210 |

Multi-tube Carousel for Model 230301

| Number of Plates on Carousel | Tube Sizes Held | Maximum No. and Orientation of Tubes per Plate | Total Number of Tubes Held (carousel fully loaded) | Corresponding Clips (Bags of 50) |
|------------------------------|-----------------|--|--|--|
| 2 | 50 mL | 2 Horizontal | 4 | The following clips are included with the carousel: 4 - 50 mL clips 6 - 15 mL clips 12 - 2.0/1.5 mL clips |
| 2 | 15 mL | 3 Horizontal | 6 | |
| 2 | 2.0/ 1.5 mL | 6 Any orientation | 12 | |

Little SHOT III™ Carousel for Microplates

Model 230710 - These carousels hold standard microplates or deep well plates. (Plates must be sealed before use in carousel.)

| Microplate Carousel | No. of Plates Held per Carousel |
|---------------------|---------------------------------|
| 230710 | 4 |



Big SHOT III™ & Little SHOT III™ Glass Hybridization Bottles

All glass bottles are supplied with blue caps and silicone "O" ring.

| Bottle Size | Model Number |
|------------------------------|--------------|
| 35 mm x 300 mm, package of 2 | 502-0300 |
| 35 mm x 225 mm, package of 2 | 502-0225 |
| 35 mm x 150 mm, package of 2 | 502-0150 |
| 35 mm x 100 mm, package of 2 | 502-0100 |

Caps and "O" Rings for Glass Hybridization Bottles

| Description | Model Number |
|---|--------------|
| Blue caps with silicone "O" rings, package of 2 | 505-0001 |
| Replacement silicone "O" rings for blue caps, package of 10 | 502-0500 |
| Red caps with liners, package of 2 | 509-0009 |

Nylon Mesh

| Mesh Size | Model Number |
|-----------------------------|--------------|
| 15 cm x 10 cm, package of 5 | 230415 |
| 23 cm x 23 cm, package of 5 | 230423 |



Boekel InSlide Out™ Hybridization Oven

Models 241000 and 241000-2

Features:

- PID temperature controller for rapid heat up and excellent temperature stability
- 20 slide capacity
- Unique sealed aluminum tray maintains temperature and humidity during incubation
- Optional polycarbonate slide holder insert accommodates 18 slides 1 x 3, and may be placed directly into a water bath for wash procedures
- UL/CSA/CE Certified



| Accessories | Model Number |
|---|--------------|
| Polycarbonate slide holder insert for up to 18 slides | C2403765 |
| Aluminum tray assembly (tray and lid - included) | C2403973 |
| Stainless steel rack insert for tray (included) | C2403754 |

| | Model 241000 (115 VAC) | Model 241000-2 (230 VAC) |
|--|--|-----------------------------|
| Temperature Range | Ambient + 10°C to 75°C | |
| Temperature Setting Range | 0°C to 75°C | |
| Stability | +/- 0.2°C | |
| Accuracy | +/- 1°C at 65°C | |
| Display Resolution | 0.1°C | |
| Heat-up Time (ambient to 50°C) | Chamber: 20 minutes | |
| Heat-up Time (ambient to 50°C) | Tray: 25 minutes | |
| Overall Dimensions (Width x Length x Height) | 45.7 cm x 45.1 cm x 15.2 cm (18 in x 17.75 in x 6 in) | |
| Chamber Dimensions (Width x Length x Height) | 19.4 cm x 29.5 cm x 1.9 cm (7.5 in x 11.5 in x .75 in) | |
| Height Above Stainless Steel Rack | 9.5 mm (.375 in) | |
| Capacity with Stainless Steel Rack | 20 - 1 in x 3 in slides, or various other sizes | |
| Capacity with Plastic Slide Holder | 18 - 1 in x 3 in slides only | |
| Net Weight | 9.5 kg (21 lb) | |
| Shipping Weight | 10.9 kg (26 lb) | |
| Electrical | 115 VAC 50/60 Hz 155 W (UL/ CSA) | 230 VAC 50/60 Hz 155 W (CE) |

Boekel Slide Moat™ Hybridization Bath

Models 240000 and 240000-2

Features:

- 30 standard microscope slide capacity
- PID temperature controller for easy temperature selection
- Tempered glass lid which seals with integral gasket on heating base
- Excellent temperature uniformity and stability
- UL/CSA/CE Certified

NOTE: Boekel strongly recommends using covered and sealed slides for higher temperatures (> 37° C) or prolonged period incubations (> 1 hour).



| Accessories | Model Number |
|--------------------|--------------|
| Light shield cover | C1303205 |

| | Model 240000 (115 VAC) | Model 240000-2 (230 VAC) |
|--|---|-----------------------------|
| Temperature Range | Ambient + 5°C to 100°C | |
| Heat-up Time | Ambient to 65°C in 20 minutes | |
| Temperature Setting/ Display | PID/ LED | |
| Stability | Typically +/- 0.2°C or better throughout operating temperatures | |
| Uniformity | +/- 35°C at 37°C; +/- 0.7°C at 65°C | |
| Capacity | 30 - 1 in x 3 in slides, 3 rows of 10 | |
| Overall Dimensions (Width x Length x Height) | 40.6 cm x 34.9 cm x 14.6 cm (16 in x 13.75 in x 5.75 in) | |
| Clearance between lid and slide pedestal | 1.0 cm (.48 in) | |
| Net Weight | 8.2 kg (18 lb) | |
| Shipping Weight | 10.4 kg (23 lb) | |
| Electrical | 115 VAC 50/60 Hz 200 W (UL/ CSA) | 230 VAC 50/60 Hz 155 W (CE) |

Boekel Programmable Slide Moat™

Models 280001 and 280001-2

Features:

- 12 Slide Capacity
- Programmable Digital Controls allow you define and control up to 3 ramp/timed segments
- Calibration Mode included so you can ensure accurate readings
- Friction Hinged Lid - no more trying to figure out where to put the lid when removing or placing your slides
- Four Leveling Feet - even if your surface isn't level, your unit can be!
- Small footprint frees up bench space
- Rapid Heat Up with excellent accuracy and uniformity
- Two wells for water should your protocol require humidity
- UL, CSA and CE certified



| | |
|---------------------|---|
| Model | 280001, 280001-2 (230V) |
| Overall dimensions | 17" W x 10"D x 4"H |
| Capacity | 12 Slides |
| Temperature range | Ambient +5°C to 100°C |
| Stability | Typically +/- 0.2°C |
| Heat up rate | Ambient 65°C in 20 min. |
| Net weight | 12.5 lbs |
| Shipping dimensions | 22" W x 22"D x 12"H |
| Shipping weight | 14 lbs |
| Electical | 115 VAC 50/60 Hz 200 W (UL/ CSA) 230 VAC 50/60 Hz 155 W (CE) |

Shake 'N' Bake™ Hybridization Oven

Models 136400 and 136400-2

Features:

- PID temperature controller for rapid heat up and excellent temperature stability
- Small footprint to conserve bench space
- Gasket sealed metal and acrylic see-through door
- Shaking speed 8 to 25 RPM
- Each unit is supplied with three shelves spaced 63.5mm apart, accommodating dishes or heat sealed bags.
- UL/CSA/CE Certified



| | Model 136400 (115 VAC) | Model 136400-2 (230 VAC) |
|--|---|-----------------------------|
| Temperature Range | Ambient +5°C to 70°C | |
| Rocking Speed | 8 to 25 strokes per minute | |
| Tilt Angle | 5.5 to 11 | |
| Stability Chamber | +/-0.2°C at 65°C | |
| Sample Vessel | +/-0.25°C at 65°C | |
| Overall Dimensions (Width x Length x Height) | 32.0 cm x 37.0 cm x 41.0 cm (12.5 in x 14.5 in x 16 in) | |
| Chamber Dimensions (Width x Length x Height) | 29.0 cm x 29.0 cm x 27.0 cm (11.5 in x 11.5 in x 10.5 in) | |
| Tray Dimensions (Width x Length x Height) | 22.0 cm x 20.0 cm x 1.3 cm (8.5 in x 8 in x .5 in) | |
| Maximum Shelf Load | 1.0 kg (2.25 lb) | |
| Temperature Setting/ Display | PID/ LED | |
| Net Weight | 11.0 kg (24 lb) | |
| Shipping Weight | 12.9 kg (28 lb) | |
| Electrical | 115 VAC 50/60 Hz 230 W | 230 VAC 50/60 Hz 230 W (CE) |

UV Crosslinker

Models 234100 and 234100-2



Features:

- Unique-to-the-market, adjustable height feature provides a more accurate reading by keeping samples on the base of the chamber, at the same distance from the bulbs as the fixed UV sensor, instead of building up samples to get them closer to the bulbs. Just simply adjust the bulbs.
- Large UV protective window allows for easier process inspection
- Two modes of operation – Energy or Time
- Open Door Safety mechanism
- Energy Efficient electronic ballasts
- Small footprint
- UL/CSA/CE Certified

| | |
|-------------------------------------|--|
| Ambient Temperature Operating Range | 16°C to 28°C |
| Maximum Time Setpoint | 999m 59s in 1 second increments |
| Maximum Energy Setpoint | 9,999,900µJ in 100µJ increments |
| Power Rating | 80W |
| Net Weight | 30lb |
| Exterior Dimensions (maximum) | 15 1/8"W x 14 3/8"D x 10 1/4"H |
| Supply Ratings | Model 234100: 120VAC, 50/60 Hz Model 234100-2: 230VAC, 50/60 Hz |



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